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09/977,363	10/16/2001	Takeshi Nishiuchi	991406A	4158
23850	7590	06/28/2004	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			WYSZOMIERSKI, GEORGE P	
			ART UNIT	PAPER NUMBER
			1742	

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Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/977,363
Filing Date: October 16, 2001
Appellant(s): NISHIUCHI ET AL.

MAILED
JUN 28 2004
GROUP 1700

Daniel A. Geselowitz
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 9, 2004.

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(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

The brief contains a statement that Appellants know of no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

The amendment after final rejection filed on November 12, 2003 has been entered.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims 16 and 17 do not stand or fall together with claims 9, 10, 14 and 15 and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

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(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

Japanese Kokai 07-230906, August 29, 1995, including English translation

This document will hereinafter be referred to as "JP '906" or "the '906 reference".

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 9, 10, and 14-17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP '906.

JP '906 discloses a method of forming a metal oxide (i.e. silicon oxide) on a rare earth metal permanent magnet, the method including coating the magnet using a sol-gel process; see paragraphs [0026] and [0027] of the English translation of the '906 reference. JP '906 discloses combining a silica system precursor component and an organic system precursor component in the prior art method. One example of the organic system precursor component is disclosed at paragraph [0022] of JP '906 as being 3-glycyl oxy-propyltrimethoxysilane [sic, 3-glycidoxypropyltrimethoxysilane] (GPMS). This compound has a chemical formula of $C_9H_{20}O_5Si$, and therefore a molecular weight of about 236 $((9 \times 12) + (20 \times 1) + (5 \times 16) + (1 \times 28) = 236)$.

JP '906 fails to teach all of the recited limitations in the appealed claims in that JP '906 does not disclose the range of 0.1-20 wt% metal oxide film forming source in the sol solution, does not explicitly teach the inclusion of carbon or the amount of carbon in the final metal oxide film, and does not specifically disclose the limitation of an

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interfacial layer with a rare earth element atom bonded with a film forming metal atom through oxygen atom, as required by appealed claim 15. The examiner respectfully asserts that these differences do not result in a patentable distinction between the disclosure of the '906 reference and the claimed invention because:

a) If one uses a 30 mol% ratio of silica (molecular weight = 60) to organic precursor component as taught in paragraph [0027] of JP '906, and further one uses GPMS (molecular weight = 236) as the organic precursor component as taught in paragraph [0022] of JP '906, then the weight percentage of silica in the overall mixture would be $(60 \times 30) / ((236 \times 70) + (60 \times 30))$, or 0.1 wt%, the lower end of the presently claimed range. Alternatively, if one use a 50 mol% ratio of silica in such a mixture, the weight percentage would be $(60 \times 50) / ((236 \times 50) + (60 \times 50))$, or 20 wt%, the upper end of the presently claimed range. Thus, the '906 reference teaches substantially the same weight percent silica precursor component as recited in the appealed claims.

b) With regard to the carbon and its amount in the final oxide film, the examiner respectfully asserts that because the materials and process steps employed in the '906 reference and those used in the process of the claims on appeal are substantially the same, it is a reasonable assumption that the final products would likewise be the same. Provided that the reaction conditions are the same, the same chemical reactions would occur and the same amount of carbon would be present as a residual material from the organic precursor component. This is analogous to the situation of *In re Best* (195 USPQ 430, CCPA 1977), which states that where the claimed and prior art products are produced by identical or substantially identical processes, a prima facie case of either

anticipation or obviousness has been established. The burden is thus on Appellant to overcome the prima facie case.

c) A similar situation is present with respect to the interfacial layer and the bond structure therein as recited in appealed claim 14. The processes of the prior art and as presently claimed are substantially the same, and thus it is a reasonable assumption that the resulting products would likewise be the same.

Consequently, a prima facie case of obviousness has been established between the disclosure of JP '906 and the invention as defined in the claims on appeal.

(11) Response to Argument

Appellant argues, on pages 7-9 of the Brief, that the mol% of added oxide as set forth in paragraph [0031] of JP '906 should not be used as a basis for asserting that the presently claimed wt% of oxide would be present in the prior art process. In response, the examiner admits that the discussion in paragraph [0031] is not the most appropriate for determining this aspect of the claimed invention. Rather, the examiner refers back to paragraph [0022] of JP '906 for the teaching of GPMS as the organic precursor, as well as to the calculations made in the rejection supra regarding how this would result in the presently claimed wt% limitations being met in the prior art.

Appellant notes on page 10 of the Brief that the sol used in JP '906 does not resemble those of the examples of the present specification. In response, the examiner notes that limitations from the specification are not read into the claims; see *In re Van Geuns* (26 USPQ2d 1057, Fed.Cir. 1993). All that is required by the appealed claims

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with respect to the sol is that one uses a sol solution into which a metal compound as a metal oxide film forming source is incorporated in a certain weight percentage range, and as set forth in the rejection supra, the '906 reference appears to show such a compound in the claimed range.

Appellant argues on page 12 of the Brief that the prior art does not disclose or suggest the carbon content within a certain range as defined in appealed claims 16 and 17. While the examiner agrees that JP '906 does not recite any specific disclosure of carbon content, the examiner's position is that if one were to employ a silica precursor component and to use GPMS as an organic precursor component, as taught by JP '906, then one would expect a carbon content within the presently claimed range to result. Appellant has not shown by any objective evidence that the carbon content claimed is in any way distinct from that present as a result of the process of JP '906.

For at least the above reasons, the examiner respectfully asserts that the rejection of claims 9, 10, and 14-17 as unpatentable in view of JP '906 is proper, and affirmation thereof is solicited.

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,



GEORGE WYSZOMIERSKI
PRIMARY EXAMINER

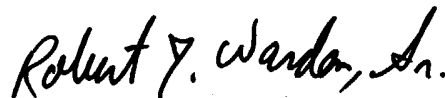
GPW
June 24, 2004

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